

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009065**Date Inspected:** 04-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Bo**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

OBG Trial Assembly Area

This QA inspector randomly observed the following work in progress in the trial assembly area:

3AE/3BE, panel point 23 – Several ZPMC and ABF employees appeared to be discussing work on the cope holes in the longitudinal diaphragms and floor beams.

1AE, panel point 8.5 - During random visual inspection on this date, QA inspector observed ZPMC personnel performing Flux Core Arc Welding (FCAW) on welds SSD34-PP8.5-154 and SSD34A-PP8.5-154, deck panel diaphragm to upper floor beam flange joint on segment 1AE, on the west side of panel point 8.5. This QA inspector observed that no ZPMC CWI or other QC inspector was present during the welding operations at OBG segment 1AE during the time that this QA inspector was present from 2025 to 2120, during which time the welding occurred, not in conformance with either Caltrans Special Provisions, Section 8-3.01 or ZPMC Critical Welding Repair Report B-CWR700. This QA inspector generated an incident report for this issue.

5AW, panel point 29 - ABF performing MT at the corner assembly area.

Bay 9 - PMT

This QA inspector monitored OBG Production Monitoring Test (PMT) #3054 for deck panels DP3054-001 and

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DP3056-001 at Gantry #2. Prior to the start of the PMT, the magnetic particle test (MT) of the tack welds was noted on the test panel as having been performed by ZPMC MT Inspector Jin Jianting. The visual inspection of tack welds and root gap was performed by ABF Representative Cao Haizhou (ABF), ZPMC CWI Sun Bo (QC), and this QA Inspector. The start time for welding was approximately 0013 hours on Saturday, 9/5/09 and the finish time was approximately 0042 hours. This QA inspector randomly verified and documented the welding amperage, voltage, and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) processes, welds 1 thru 4 at the completion of both the GMAW root pass and SAW cover pass. The welding variables recorded by QC appeared to comply with WPS-B-T-2342-U1-(U-rib)-4. The welds were visually inspected by ABF, QC and this QA inspector. QC and ABF informed this QA inspector that all four welds were acceptable and this QA Inspector concurred. This QA inspector randomly witnessed ZPMC ultrasonic testing (UT) inspector, identified as Ma Jilong, perform UT on each of the 500 mm test welds for depth of penetration and conformance. This QA inspector selected ten designated locations for macroetch sampling per contract requirements. Each macroetch location was stamped by ZPMC personnel with the number 3054, the letter M, and an individual macroetch identifying number for each macroetch. After removal from each of the weld test specimens, polishing, and acid etching of the selected end, the macroetches were evaluated with a 7X optical magnifier and accepted by QC, ABF, and this QA inspector.

All ten sample macros appeared to meet requirements and were noted to appear acceptable. See Caltrans U-ribs PMT Inspection Sheet, ZPMC production monitoring test plate inspection report, and Caltrans Macro Etch Log - all dated 9/5/2008 for additional information.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

Except as noted above, no relevant conversations on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet, George	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer
